NEDIA Natural

Grow Naturally

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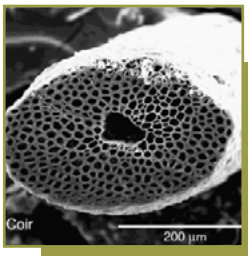
WHAT IS COIR?

Coir (pronounced “koyer”) is the dark brown fiber from the husk of the coconut, the part between the hard inner shell and the outer covering. This biodegradable material has unique physical and chemical properties, which makes it the right choice for manufacturing a variety of products such as doormats, mattresses, upholstery stuffing, ropes, fishing nets and much more.

The Basics: Unique Structural Features of Coir

To understand why coir is an ideal organic material for growing medium, it needs to be examined microscopically. A careful observation would reveal a structure that resembles a bundle of drinking straws. These tough and elastic hollow fibers have the capacity to hold eight to nine times its weight in water.



The arrangement of these bundles is such that it allows water to pass between them easily. The space between the bundles is occupied by air. Hence, due to its unique structure, coir can store water without becoming soggy and remains light and fluffy even when wet. Coir is also impervious to any damage caused by saltwater, making it suitable for shoreline applications as well.

What is KoirPeat?

Various coir-based manufacturing processes generate a byproduct generically known as coir pith. Vast amounts of this coir pith are accumulated by tropical countries across the globe, where coconut palm trees abound. For over two decades, people have used coir pith as a growing medium for a variety of plants. Until recently, its availability and quality have been undependable and highly variable.

Nedia Natural, a company that embraces the significance of eco-friendly and biodegradable products, has been profoundly successful in manufacturing and marketing high-quality coir pith under the trade name KoirPeat™. The table below shows a comparison between the characteristics of KoirPeat™ and the traditional sphagnum peat.

Characteristics	Spagnum Peat (30-50% peat)	KoirPeat™ (50-100% coir)
Water-holding capacity	Very high	Extremely high
Air content (drainage)	Low to moderate	High, even immediately after saturation
Drying response	Shrinks	Does not shrink
Wetting after drying	Hydrophobic; very difficult to rewet	Rewets quickly
Longevity in hot climate	1-2 years	At least 4 years, probably longer
Sustainability	Mined from ancient peat bogs overexploited	Renewable resource
Biological activity	Fungus gnats and water molds thrive in it	Fungus gnats seldom colonize it. KoirPeat™ suppresses the growth of several pathogenic fungi.
Chemical reaction	Neutral pH	Very acidic (Mix is buffered to be slightly acidic)

Growing with KoirPeat™: Plants and Soil Health

Growing with KoirPeat™ may take some time to familiarize. Unlike regular soil conditions, the surface of coir-filled pots appears dry and feels dry to touch as KoirPeat™ stores water in its microscopic tubes. This unique property makes coir less hospitable to harmful root-rot fungi, algae and fungus gnats that thrive in wet conditions. The stored water can be absorbed by the plant roots through the fibers as required. Moreover, the composition of KoirPeat™ creates a favorable environment for the beneficial mycorrhizal fungi which help to improve soil health and increase garden harvests. Coarse coir fiber, also used as landscape mulch, helps to repel snails and slugs.

Nedia Natural: Focus on Quality

Nedia Natural makes high-grade horticultural growing medium such as KoirPeat™ by removing harmful salts and achieving a balanced pH for optimal plant growth. This treatment is required, as untreated coir pith contains high levels of salt and may have high pH levels that prevent plants from accessing nutrients. KoirPeat™ is an entirely organic and eco-friendly growing medium which contains several macro and micro plant nutrients, including substantial quantities of potassium and phosphorus. Hence, it is a great supplement to other nitrogen-rich soil blends or fertilizer treatment programs.

Nurseries that grow flowering plants would experience great success by using KoirPeat™ due to its unique properties. It is a perfect growing medium for plants with or without soil. Its high air-porosity and its excellent water and nutrition holding capacity help in achieving increased yields as well as simply making a healthier environment. Nedia natural also offers buffered KoirPeat™ which ensures that plants receive sufficient amount of calcium needed for its healthy development.

Nedia Natural: Multifaceted User-friendly Products

Coir-based potting mixes contain a blend of different particle sizes which include pith, fibers and husk chips. The finely ground KoirPeat™ holds more water and less air, while the Koir™ fibers contain more air and less water.

The KoirChip™ falls in between the two. Using different fractions of these three components, Nedia Natural can make custom blends to suit the moisture and air needs of the plants that will grow in it. For instance, the KoirPeat™ Blocks have finely ground coir pith to help speed up seed germination and support tender seedlings. The KoirPeat™ Bricks come compressed for easy storage, making it more convenient and less bulky than other planting media. One compressed KoirPeat™ Brick (8”x 4”x 2”) can expand quickly to about 2 gallons of potting mix. It can be combined with sphagnum peat and other mixes or can be used by itself to increase the health of the plants. Hence, keeping the usability and convenience-factor in mind, Nedia Natural also produces products in different shapes and sizes to suit the specific needs of various agriculturists.

KoirPeat™ Block

The KoirPeat™ block is the most commonly used bulk product by wholesale growers and distributors. It is cost effective with easy wet expansion. It has high air porosity, high water retention capacity and serves as a multipurpose growing media for horticulture, floriculture and worm bedding. The block can be used with or without soil. It is a feasible alternative to peat moss, sphagnum moss, rock wool, etc. The KoirPeat™ block is also proved to be a better medium for growing commercial vegetable seedlings such as tomatoes, cucumbers, lettuce, cabbage, cauliflower, eggplant and herbs.

Applications:

- Potting mix blends
- Hydroponic growing
- Lawn and golf course construction
- Horticulture and floriculture
- Composting additives
- Growing medium for vineyards
- Bedding medium for earthworms

Benefits:

- Excellent water-holding capacity
- Ability to retain nutrients
- Good drainage and aeration characteristics
- Acceptable pH level
- Odorless and easy to handle
- Promotes strong root growth
- Reduces watering frequency even in high-temperature conditions.

Specifications for KoirPeat™ Block

Property	Typical Value
Block dimensions	30 cm x 30 cm x 13 cm (+/- 1 cm)
Weight	5 Kg
Moisture Content	< 15%
pH	5.5 - 6.8
Electrical conductivity	< 0.50 ms/cm
Total Organic Matter	95%
Compression Ratio	4:1
Cellulose Content	20% to 30%
Lignin Content	44% to 48%
Packing	Palletized and Stretch wrapped
Loading Capacity per 40’ HC Container	200 blocks per pallet x 20 pallets (4,000 blocks/container)

KoirPeat™ Brick

KoirPeat™ bricks are specially made for retail stores and nurseries. It is a bio-organic substrate that has exceptional characteristics which promote plant growth exponentially. These bricks are an ideal option for use in troughs, hanging baskets, pots or other applications that require relatively less material. A compressed KoirPeat™ brick expands quickly to about 2 gallons of potting mix. The KoirPeat™ brick can be custom labeled and individually packaged with shrink-wrap for retail sale, in accordance with customer requirements.

Applications:

- Home gardening
- Hanging baskets
- Flower pots
- Vegetable gardens

Specifications for KoirPeat™ Brick

Property	Typical Value
Block dimensions	20 cm x 10 cm x 5 cm (+/- 1 cm)
Weight	650 g (+/- 10 g)
Moisture Content	< 15%
pH	5.5 - 6.8
Electrical conductivity	< 0.50 ms/cm
Total Organic Matter	95%
Compression Ratio	8:1
Cellulose Content	20% to 30%
Lignin Content	44% to 48%
Packing	Palletized and Stretch wrapped
Loading Capacity per 40’ HC Container	1500 bricks per pallet x 20 pallets (blocks/container)

KoirPeat™ Disc

KoirPeat™ discs are ideal for growing seedlings and saplings. It keeps the plant roots moist. In addition, it prevents the plant roots from being exposed to direct sunlight. It also controls the growth of weeds, thereby reducing the loss of soil nutrients. KoirPeat™ disc was originally developed for growing Asteraceae (sunflower family) which require a robust, high air-filled porosity (AFP) medium with relatively low water retention.

The KoirPeat™ disc is a great solution for all types of home gardening purposes. The application of the KoirPeat disc is quite simple. All that needs to be done is to soak or add water until the disc expands to the required volume.

Applications:

- Seedling starter
- Sapling starter
- Bulk nursery growing
- Growing small plants

Specifications for KoirPeat™ Disc

Property	Typical Value
Electrical conductivity	< 0.50 ms/cm
pH	5.5-6.8
Total Organic Matter	0.95
Moisture Content	< 15%

KoirChip™ Block

KoirChip™ block is an organic potting medium made from natural coconut fibers. This all-natural material is not just ideal for hydroponics and mixed media cultivation but is also an excellent soil conditioner. It holds more water, air and nutrients than bark chips and does not dry out quickly. KoirChip™ blocks maintain the air circulation just as good as bark. It contains five times more lignin than bark, which makes them highly resistant to decay. KoirChip™ Blocks are mostly used by wholesale nurseries and large retailers.

Applications:

- Orchids growers
- Asteraceae (Sunflower family) growers
- Ericaceae (Heather family) growers
- Decorative ground cover for landscaping and mulching

Benefits:

- Balanced pH
- Low salt content
- Odorless
- Mixes well with soil
- Easy to store

Specifications for KoirChip™ Block

Property	Typical Value
Block dimensions	30 cm x 30 cm x 13 cm (+/- 1 cm)
Weight	4.5 Kg
Moisture Content	< 20%
pH	5.5 - 6.8
Electrical conductivity	< 0.80 ms/cm
Total Organic Matter	95%
Compression Ratio	4:1
Lignin Content	44% to 48%
Packing	Palletized and Stretch wrapped
Loading Capacity per 40' HC Container	200 blocks per pallet x 20 pallets (4,000 blocks/container)

KoirChip™ Brick

KoirChip™ bricks ensure that plants never go thirsty, thanks to its high water-retention property. The texture of the KoirChip™ allows it to possess excellent drainage properties. Plants are no longer at risk of "drowning" in over-watered soil. The consistency of the KoirChip™ brick is such that it provides space for the roots to breathe and grow freely, capturing the essential air-to-water ratio for robust growth. This pathogen-free media can be implemented to potting soil or in place of bark mulch as an attractive and all-natural ground cover.

Applications:

- Hydroponic medium
- Worm bedding
- Composting additives to allow soil conditioning

Specifications for KoirChip™ Brick

Property	Typical Value
Block dimensions	20 cm x 10 cm x 5 cm (+/- 1 cm)
Weight	450 g (+/- 10 g)
Moisture Content	< 20%
pH	5.5 - 6.8
Electrical conductivity	< 0.80 ms/cm
Total Organic Matter	95%
Lignin Content	44% to 48%
Packing	Palletized and Stretch wrapped
Loading Capacity per 40' HC Container	1500 blocks per pallet x 20 pallets (30,000 bricks/container)

KoirChip™ Disc

KoirChip™ discs are proven as an excellent medium for growing plants like orchids, bromeliads and anthuriums, as well as for hydroponic growing and other growing methods that require well-aerated soil medium. These discs provide plants with a sturdy growing structure all year long. KoirChip™ compressed discs have been specially treated to give excellent results for a variety of potted plants for home and commercial hydroponics.

KoirChip™ disc size, packaging and quality can be customized in accordance to customer request.

Applications:

- Bromeliads potting medium
- Orchids potting medium
- Anthurium potting medium
- Roses and lilies potting medium
- Home and commercial hydroponics

KoirGrowBag™

KoirGrowBag™ comprises of compressed coir peat placed inside a UV resistant polyethylene bag. Simply add water and the coir peat will expand and provide a medium to grow without requiring additional space or a container to grow in. It is available in custom sizes.

Applications:

- Vegetable and herb growing
- Seed start-ups
- Works well in commercial and residential applications

Benefits:

- Portable
- Re-usable after a harvest
- Substitute for potting soils
- Conserves water

KoirPot™ Seedling Cups

KoirPot™ Seedling Cups are eco-friendly and biodegradable. It is the best replacement for the commonly used plastic cups for growing seeds.

KoirPot™ Seedling Cups are available in different sizes per the customer's needs. The seedling cups are made from all-natural organic coconut coir. These cups can be easily planted in the ground along with the seedlings.

Benefits:

- Water retention
- Easy to transplant
- Organic and biodegradable

KoirPot™

KoirPot™ is made from coconut fiber and natural latex. These sturdy pots are an environment-friendly alternative to plastic and peat-based containers. It is mainly used in horticultural farms, greenhouses, nurseries, and can be used with flowering plants to give homes and offices an elegant and inviting look. KoirPot™ is 100% biodegradable and transforms into organic matter upon decomposing. Commercial growers can use KoirPot™ to grow plants that can be planted directly into the ground, skipping the labor-intensive transplanting step, which often leads to transplant shock. KoirPot™ holds in more water and retains it longer, resulting in less watering needs.

The walls of the KoirPot™ are porous enough for the roots to penetrate. When the roots penetrate the pot walls, contact with the air stops further growth of the roots. Root buds then start to appear, and secondary root systems develop throughout the pot, creating a dense network of root hairs. This phenomenon is known as "aerial root pruning" which can significantly increase the survivability of the plant. When KoirPot™ is planted in the ground, it will biodegrade in 3 to 6 months, depending on the soil conditions. There is no need to remove the plant from the pot. KoirPots™ are available in a wide range of sizes, which can be customized to specific requirements.

Applications:

- Bulk containerized growing
- Horticultural farms, greenhouses and nurseries
- Growing herbs and vegetables
- Domestic gardening

Benefits:

- A renewable alternative to plastic and peat pots with faster plant growth
- Helps maintain moisture levels in the growing media
- Easy to transplant
- Higher resistance to mold and fungi
- Compostable

KoirPot™ Root Trainer

The KoirPot™ Root Trainer plays a major role in the initial development of the roots. It is easy to use and made from natural materials. The walls of the KoirPot™ Root Trainer are permeable enough for roots to go through. As soon as the roots get exposed to air, the roots stop growing. The root buds then start to appear, developing secondary roots. Eventually, the entire pot will have a dense network of roots. After the roots are fully developed, it can be transplanted to the ground.

Applications:

- Cultivating saplings in nurseries
- Seedling starter

Benefits:

- A natural alternative to plastic products
- Promotes excellent root system
- Eliminates transplanting shock
- Conserves water

KoirPole™

The KoirPole™ consists of natural coir fibers wound around a core, used as a support for vines and creepers. The ability of coir fiber to hold moisture enhances the root growth of the plant and is ideal for indoor or outdoor creeper plants. The extensive grip of the creeper roots to the coir fiber covering on the pole makes it climb faster and with more vigor.

KoirPole™ is available in a variety of lengths and are stackable.

Applications:

- Growing creeping plants & vines
- Use in plant nurseries
- Indoor/outdoor horticultural décor

Benefits:

- Porous nature of the coir fiber helps vigorous root growth
- Retains moisture and conserves water
- Extensible by stacking

KoirTray™

KoirTray™ is made of all-natural coconut fiber and natural latex which is 100% biodegradable. It plays a major role in nurseries for replanting and can be used as a bed for sowing seeds to be transplanted later. These trays are also used as a natural, biodegradable modular system for green roofs. These modules are usually square shaped. Unlike traditional modular systems, the coconut fiber decomposes over time and the KoirTray™ module is converted into humus. This eliminates the use of plastic materials for growing and installing green roofs, increasing the sustainability of the green roof system.

Major benefits of KoirTray™ systems for green roofing systems are:

- Pre-establishing plants in an off-site nursery, allowing installation of green roofs that are 100% grown out from day one, without the risk of shocking the plants during installation
- A potentially broader plant palette. The KoirTray™ modules can hold 3”-6” of growing media to support intensive green roof designs.
- Increased flexibility to support various roof designs.
- Ability to be installed on sloped roof applications, in addition to standard flat roof installations.

KoirWeedmat™

KoirWeedmat™ is an easy, environment-friendly and biodegradable method for weed control. It is a natural alternative to hardwood mulch. Made from 100% natural coir fibers and natural latex, the KoirWeedmat™ prevents unwanted weeds and allows water to pass through to the roots of the plants. It helps to keep the roots moist. It is available in a variety of sizes and shapes. The most popular sizes are 12", 16", 20", 24" and 30" diameter.

Applications:

- Natural weed protection around trees
- Used as a carrier of fertilizers and soil conditioners
- Used in potted plants as a weed barrier

Benefits:

- Slit cut for quick installation
- Reduces need for manual weeding
- Excellent moisture retention
- Suppresses weeds naturally
- Works well on slopes
- Conserves water
- Promotes plant growth and reduces plant mortality
- Chemical free
- Helps build soil carbon levels
- Eliminates or reduces herbicide use
- Prevents soil erosion
- Aesthetically pleasing

KoirLiner™

KoirLiner™ is a natural pre-formed coir fiber liner which is suitable for placing inside wire baskets. It can be potted up with soil or soilless media. While growers can easily use them with the conventional overhead watering method, KoirLiner™ is ideal for ebb and flow systems as well. It absorbs water and nutrients from the ebb and flow tray. They allow the nutrients to quickly drench the roots, as the water disperses immediately. KoirLiner™ is available in various sizes and shapes

Benefits:

- Requires less watering due to water retention
- Allows better aeration for roots
- Extends the life of hanging baskets
- Ideal for indoor planting
- Faster growth and healthier plants
- Anti-fungal characteristics

Applications:

- Hanging baskets
- Terrace gardening
- Window boxes

JuteMesh™ Landscape Fabric

JuteMesh™ is a 100% all-natural, all-purpose, earth-friendly versatile fabric. This fabric can be used outdoors for seed germination, erosion control, as a shade cloth or as a protective wrap. JuteMesh™ helps seeds germinate by holding in moisture. It stores heat to accelerate vegetative development allowing uninhibited growth of woody plant species, grass and ground cover. The JuteMesh™ has the ability to protect plants from windburn, freezing rain, snow, ice and guards against the sun for sensitive plants. It is also an earth-friendly soil stabilizer.

Advantages:

- Protects from erosion and sediment loss
- Maintains soil nutrients
- Retains moisture

Available in 4'x225' (100 Sq.Yd) rolls.

KoirLog™

KoirLog™ helps in the growth of vegetation and protects streambanks and shorelines from soil erosion. It is made up of compact coir fiber core for superior filtration, covered by an exterior coir mesh. They are made from double cleaned, unsorted coconut fiber encased in a high tensile strength coir twine netting. KoirLogs™ help to dissipate the impact of wave action and flowing water, traps sediments and encourage vegetation growth. During installation, seedlings or plant cuttings can be planted into the KoirLog™. Sediments trapped by the KoirLogs™ along with the inherent property of the coir fiber to absorb and retain moisture, provide an ideal medium for vegetation establishment.

Applications:

- Streambank stabilization
- Shoreline protection
- Wetland mitigation
- Channel edge liner
- Landscaping

Available in 12", 16", and 20" diameter and 10 feet lengths.

NEDIA Natural

Grow Naturally

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